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Notes on North American Moths of the Families Phalænidæ and Pyralidæ in the British Museum. By A. S. Packard, Jr.

During a short stay in London I was enabled to spend a few days in the British Museum and study the collection of moths named and arranged by Mr. F. Walker, forming a part of the types of the species described by him in the Catalogue of the Lepidoptera Heterocera of the British Museum. I am indebted to Dr. J. E. Gray, the keeper of the Zoological Department, to Mr. F. Smith, and also to Mr. Walker, for many courtesies and facilities extended to me. Though Messrs. Grote and Robinson* have already published some notes on these families, I present for publication these, containing references to all the species of Phalænidæ and Pyralidæ in the Museum from North America, to aid American entomologists in the thankless and well nigh impossible task of identifying our species from the too brief and insufficient or misleading descriptions contained in the museum catalogue of Heterocerous Lepidoptera, and also for my own use in my museum work.

Messrs. Grote and Robinson have fully expressed the feelings I entertain regarding the nature of these catalogues. Their publication will forever be a sad hindrance to American lepidopterists, and a warning to students to describe fully and *comparatively* their species, and from a sufficient number of specimens. A number of leading European entomologists have also expressed their opinion as to the value of these lepidopterological catalogues. In endorsing their criticisms I can but advert to the doubtfully expedient course of the officers of the museum in accepting and publishing such imperfect and unsatisfactory work. As it is, the species described in these cata-

*Notes on the North American Lepidoptera in the British Museum and described by Mr. Francis Walker. (Trans. Amer. Ent. Soc. Vol. 2, 1868-9.) Philadelphia.

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logues, as may be seen below, can only be recognized by personal examination of the specimens, since so many are referred to wrong genera, or based on rubbed and imperfect specimens. When there is any doubt about the description, the safer course is to ignore it altogether. These notes refer simply to the specimens as they stand in the museum, and not to the published lists. I have not attempted here to collate them with the names in the catalogues or with the names of other authors; so that the name given here may be quite different either from the published or correct one. A mark of exclamation (!) is placed after the names of such species as seemed to me valid, so that students of the catalogue may be sure that such names represent a distinct species, and are not founded on some imperfect specimens of allied species or genera. In a few cases names believed by me to be correct are enclosed in brackets. The notes are printed just as written on the spot.

Choerodes incurvata (Florida), specimens same as *C. transmutans* from Fla! and both are the same as *C. transposita* and *C. transversata!* *C. transposita* is the dark var. with submarginal zigzag shade. *C. transversata* is the paler var. with the zigzag shade wanting, and borders of both wings subochreous.

C. transvertens, one ♂ only. Is a var. of C. transversata.

C. contingens, scarcely a var. of C. transversata.

C. transducens = ♂ Eutrapela clemataria!

C. transferens = ♀ E. clemataria!

The other species of *Choerodes* are good.

In drawer 3 are 6 ♂ labelled *Eutrapela clemataria* — same as the single ♂ *E. clemataria* labelled *C. transducens*.

Apicia arbuaria is a small Caberodes, and *A? agathoaria* is not congeneric with it, or congeneric with *A? rithrusaria*. There is no species of Apicia in the collection.

Priocycla armataria!

Epione calypusaria = Sicya solfataria.

Epione serinaria! There are two specimens of this species labelled *E. solfataria*.

Epione agyllaria is a good species; from St. Martins' Falls.

Epione pustularia is neither Epione nor Sicya. Do not know

what it is; reminds me of Drepanodes, but too much rubbed for identification.

Sicya truncataria; there are no examples.

Hyperetis alienaria!

H. nyssaria. One of the specimens (*b*) does not differ from H. alienaria. The other (*a*) is a ♀, dark, finely preserved, but conspecific, and I should unite *nyssaria* with *alienaria.*

H. subsinuaria seems to be a small, dark, well marked var. of *alienaria*, but scarce anything more.

H. nepiasaria!

H. irregulata is not a Hyperetis. Do not know what it is. No locality.

Endropia pectinaria; the 4th specimen is a Selenia!

E. pectinaria = E. deductaria Walker's type; one specimen is a rubbed *E. pectinaria* Walk.!!

E. hypochraria!

E. metusaria = *E. hypochraria.*

E. refractaria is a much rubbed *E. hypochraria.*

E. astylusaria!, a good species, closely allied to *E. pectinaria* of Walker.

E. madusaria a good species, closely allied to *E. amœnaria.*

E. oponearia does not differ from *E. madusaria.*

E. muzaria!

E. propriaria is a rubbed *E. tigrinaria.*

E. tiviaria. A good species.

E. semiclusaria is a large Cleora.

Ellopia subprivata, much rubbed = *Epione serinaria!*

E. pultaria!

E. perfidaria = *fiscellaria*, both = *E. flagitiaria.*

E. panisaria, one specimen is a true *E. pultaria*, and the other is = *Endropia lateritiaria!*

E. athanaria is nearly related to *E. seminudata*, and both are apparently good species.

Ellopia? amyrisaria is a Caberodes! and too much rubbed for identification or description.

E. plagifasciata is a Numeria.

E. basiaria = E. incoloraria, both species of Acidalia.

E. deplanaria is an Endropia.
E. scitata is probably the common E. flagitiaria.
E. ribearia = Abraxas ribearia.
E. myandaria is a Caberodes!
Caberodes imbraria!
C. remissaria!
C. superaria = C. remissaria! both may prove to be dark varieties of *C. floridaria* Walk.
C. phasianaria [= C. metrocamparia].
C. antidiscaria!
C? agreasaria = Endropia lateritiaria.
Tetracis aspilata!
T. pandaria is a large rubbed *Caberodes metrocamparia!*
Eurymene phlogosaria!
E. alcoolaria!
Selenia æsionaria is a large singular species of Hyperetis!
S. alciphearia!
Azelina neonaria is a true *Hyperetis alienaria.*
A? zalissaria is a true Azelina closely allied to *A. Hübneraria.* It is a good species.
Metanema inatomaria!
Ennomos magnaria!
E? arsesaria [= Tetracis ægrotata!]
E. subsignaria!
Caripeta angustiorata [= Parennomos piniaria Pack.!]
C. latiorata!
C. divisata!
Biston ursaria!
Amphidasys cognataria!
A. speratariа!
Boarmia momaria!
B. humaria! All the specimens rubbed.
B. intraria!
B. defectaria = B. larvaria.
B. indicataria!
B. signaria = B. sublunaria.
B. filaria!

B. transfixaria is ♀ of *B. intraria*, represented by 2 ♂.
B. sublunaria!
B. albigenaria!
B. ephyraria = B. humaria!
B. intractaria is a rubbed *B. momaria.*
B. signataria is *Tephrosia Canadaria!*
B. plenaria, from Mexico, is a good species.
Tephrosia Canadaria!
T. spatiosaria = Boarmia sublunaria.
T. abraxaria!
T. intractaria is a rubbed *B. sublunaria!*
T. submuraria!
T. dispuncta is a *Macaria.*
Tephrosia? comptaria are two rubbed specimens of *Tephrosia scitularia*, which is a small *Cidaria.*
T. notaria [= *Fidonia bicoloraria* Minot!]
T. imperfectaria, of this species there is only a poor single specimen.
T. amplaria = Bronchelia disserptaria, both = B. liriodendraria.
Stenotrachelys approximaria!
Geometra inclusaria!
Jodis tractaria [= Aplodes mimosaria Guenée.]
Nemoria subcroceata!
N. incertata. Almost too much rubbed for identification.
Dyspteris abortivaria!
Aplodes glaucaria!
Ephyra myrtaria! E. stabilita! E. solitaria!
Acidalia purata!
A. tacturata!
A. impauperata!
A. ordinata!
A. restrictata!
A. enucleata!
A. compensata!
A. timandrata!
A. quadrannulata = *Ephyra myrtaria!*

A. restorata!

A? fissinotata = Tephrosia dispuncta and Macaria granitata and Larentia? exnotata.

A? sparsaria is scarcely an Acidalia.

Stegania pustularia!

Cabera erythemaria!

C. intentaria!

Corycia restaliata!

C. albata!

Macaria granitata!

M. haliata = M. granitata! Not even a variety!

M. æmulataria!

M. laticincta is a Hyperetis allied to *H. alienaria.*

M. æquiferaria! M. inaptata! This is not a Macaria.

M. transitaria!

Macaria? submarmorata is a good species. It is a true Macaria.

M. postrema is a rubbed *M. æquiferaria! Macaria impropriata* is a Paraphia too much rubbed for identification.

Macaria? indeclinata = Endropia hypochraria!

M. integraria is an Aspilates.

M. inextricata!

M. exanspicata is entirely too much rubbed and can probably never be identified.

M. tractata!

M. irregulata = M. granitata.

M.? refusaria is too much rubbed for identification, probably a rubbed M. granitata, and I should call it a synonyme.

M. retinotata = M. granitata!

Halia subcessaria is very near *H. wavaria*, but ground color much whiter.

Tephrina expressaria! is a species of Boarmia.

Lozogramma defluaria.

L. extremaria!

Numeria occiduaria!

N. obfirmaria!

Fidonia truncataria!

F. discospilata!
Hæmatopis grataria!
Aspilates atropunctaria!
A. canosaria [= Cleora pulchra of Minot]!
Napuca orciferata!
Zerene catenaria! A *Cleora pulchra* is among the specimens placed under this name.
Anisopteryx sericeiferata [= A. vernata Peck].
Larentia? fidoniata [= Fidonia bicoloraria].
Larentia flammifera!
L. cervinifascia!
L. basaliata!
L. ziczacata!
L. placidata = L. ziczacata!
L? exnotata = Macaria granitata!
L? renunciata is our common Ypsipetes pluviata.
L? exornata!
L. costinotata [= is Tephrina strigularia (Minot sp.)!]
Eupithecia implicata!
E. explanata!
Lobophora fusifasciata!
Thera? bitactata!
Ypsipetes? immersata [is Tephrosia disconventa *fide* Grote.]
Melanthia ruficillata!
M. gratulata!
M. gothicata!
M. reciprocata [= Odezia albovittata Guen.]
M. concordata!
M. lacustrata!
M. intermediata = M. lacustrata.
M. ideata = M. lacustrata.
Coremia propugnata!
C. ferrugata!
C. obruptata is a Camptogramma. The species good.
Camptogramma gemmata!
C? abruptata, St. Martin's Falls, is a genus not known to me; it is based on a poor specimen.

Phibalapteryx erosiata!
P. intestinata!
P. Floridata = P. intestinata.
Scotosia dubitata!
S. undulata!
S. lobophorata is not a Scotosia.
S. inexplicata is probably not a Scotosia and too much rubbed for identification. The specific name is exceedingly appropriate.
Cidaria russata!
C. remotata!
C? gibbicostata [= Tephrina strigularia (Minot)].
C. diversilineata!
C. propulsata!
C. molliculata may prove to be a var. of *C. remotata.*
C. cunigerata!
C. inclinataria seems to be a true *Coremia!*
C. rigidata!
C. explagiata; one broken and rubbed specimen.
C. albifusata!
C? frigidata is an Ypsipetes!
Pelenga similis is closely allied to Cidaria propulsata.
Anaitis orillata!
Heterophleps atrosignata is Halia successaria.

PYRALIDÆ.

Hypena Baltimoralis!
H. rufinalis is a Crambus.
H. damnosalis!
H. scabralis!
H. benignalis is a variety of H. Baltimoralis.
H. bijugalis is a variety of H. Baltimoralis.
H. edictalis!
H. generalis!
H. deceptalis!
H. manalis!

H? Idæusalis is not a Pyralid; perhaps a Tineid.
H. caducalis!
H. germanalis is near, if not the same as *H. humuli* Harris.
H. cæcalis! Is it a Hypena?
H. edutalis!
H. sobrialis is not a Hypena.
H. cacuminalis. Too much rubbed for description.
H. fractiosalis. A good species, but is it a Hypena?
H. fallacialis!
H. habitalis!
Doryodes acutalis [not *D. acutalis* Guen.] is a genus allied remotely to Hypena.
Hormisa absorptalis!
Rivula propinqualis!
Herminia morbidalis!
H. pedipilalis!
H. curvalis!
H. jacchusialis!
H. theralis! Too much rubbed for identification.
H. gyasalis = H. pyramusalis.
H. pyramusalis = H. gyasalis.
H. protumnusalis!
H. eumelusalis!
H. metonalis! Specimens in bad condition.
H. biferalis! Specimen in bad condition.
H. cloniasalis!
H. phalerosalis!
H. salusalis!
H. heliusalis!
H. clitosalis!
Bleptina surrectalis is the common large Aglossa.
B. mynesalis!
Epizeuxis goosalis is not a Helia.
E. lituralis!
Palthis angulalis!
Pyralis farinalis!
P. hyllalis!
Aglossa cuprealis!

Ennychia glomeralis!
Desmia funeralis!
D? janassialis!
Ædiodes minualis!
Samea ebulealis!
S. elealis!
S. phyllisalis!
Asopia archasialis!
Agathodes monstralis!
Paraponyx allionealis!
Hydrocampa itealis! Not a true Hydrocampa; wings much longer.
Zebronia serinalis, but with longer wings than usual in the genus.
Leucochroma icciusalis!
Phakellura nitidalis!
Ph. hyalinatalis!
Ph. immaculalis!
Botys argyralis is *B. ventralis* G. & R. their label annexed.
B. verticalis!
B. apertalis!
B. strictalis!
B. theseusalis!
B. siriusalis!
B. licealis!
B. olliusalis!
Isopteryx? obliteralis! The species is a good one.
" leucothoalis! The species is a good one.
Oligostigma seminealis!
O. curviferalis!
Catyclysta lamialis!
C. claudialis!
C. principalis!
C. confusalis!
Botys obliteralis and *B? pantheralis* are considered as synonymes by Walker, one specimen representing both labels. Specimens too much rubbed for identification.

B. thyasalis = B. apertalis and B. oxydalis. Placed together by Walker.

B. mysippusalis = B. periusalis.

B. periusalis = B. mysippusalis.

B. arsaltealis!

B. thymelusalis!

B. æglealis!

B. illutalis!

Pionea ennusalis!

P. sculpturalis [= *Pantographa lineata* G. & R.]

P. helvalis, too much rubbed for description.

P. dionalis! " " "

Spilodes nisæecalis, too much rubbed for identification.

Scopula rubigalis, *S. orasulalis*, *S. nesturalis*, *S. commixtalis*. *Mecyna reversalis*. All founded on poor, unrecognizable specimens.

Stenopteryx hybridalis!

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